

Remarks

Applicants respectfully request reconsideration of the present U.S. Patent application as amended herein. Claim 1 has been amended. Claims 35-40 have been added. Claim 34 has been canceled. Thus, claims 1, 3-6, 8-11, 13-33 and 35-40 are pending.

Claim Rejections - 35 U.S.C. § 112, First Paragraph

Claims 1, 3-56, 8-11 and 13-32 were rejected as containing subject matter that was not described in the specification in such a way as to enable one skilled in the art to which it pertains to make and/or use the invention. Specifically, the Office Action states that the

...specification discloses interface cards and discloses that the interface cards can receive two different types of traffic but fails to disclose how the two different types of traffic are received and processed differently.

See page 2.

The specification, as originally filed, discloses the following:

Physical layer framer 110 organizes the data received through line interface 100 into frames having predetermined formats so that the data can be processed by the components of the card as well as other cards of the network switch... [P]hysical layer framer 110 can convert data between Synchronous Optical Network (SONET) frames and an internal cell format that is used by the components of the card of Figure 1... Other conversions can also be supported.

See page 5, paragraphs 0011 and 0012.

While Applicants maintain that the specification as originally filed enables one of skill in the art, the specification has been amended to include material from U.S. Patent application number 09/745,982, filed December 12, 2000 and entitled "A BACKPLANE

PROTOCOL,” which was incorporated by reference in the present application. See page 13, paragraph 0042. This amendment is being made to expedite prosecution of the present application and not because Applicants acknowledge any deficiencies in the present application. The figure numbers and reference numerals have been changed to be consistent with the present application. Therefore, no new matter has been added.

Claim Rejection - 35 U.S.C. § 112, Second Paragraph

Claim 34 was rejected as being indefinite for failing to particularly point out and distinctly claim the subject matter of the invention. Specifically, “the plurality of buffers in the backplane interface” lacks antecedent basis. Claim 34 has been canceled.

Therefore, the rejection of claim 34 is moot.

Rejection of Claims 1, 3-5, 11, 13-20 and 23 Under 35 U.S.C. § 103(a)

Claims 1, 3-5, 11, 13-20 and 23 were rejected as being unpatentable over U.S. Patent No. 6,266,341 issued to Surprenant, et al. (*Surprenant*) in view of U.S. Patent No. 6,226,287 issued to Brady (*Brady*).

Claim 1 recites:

a plurality of interface cards coupled to the backplane, the interface cards coupled to receive multiple channels of network traffic from external sources, the plurality of interface cards to receive one or more channels of data according to a time division multiplexed (TDM) protocol and one or more channels of data according to a second protocol, the interface cards to route the channels of data *over the backplane using a single format* to one or more predetermined interface cards coupled to the backplane within the network switch.

Thus, Applicants claim converting incoming data to a single format for transmission over a backplane within the network switch.

The Office Action fails to address this portion of claim 1. Neither *Surprenant* nor *Brady* teach or suggest using a single format to route channels of data including TDM data and a second protocol within a switch. *Surprenant* discloses bridging traffic according to multiple protocols. See Abstract. However, *Surprenant* discloses a separate bus for each protocol type. Specifically, *Surprenant* discloses

...communications system 50 includes at least three (3) separate types of busses, e.g., TDM bus 78, packet bus 80A (or 80B), etc., and control bus 92, etc.

See col. 10, lines 10-14. Therefore, *Surprenant teaches away* from the invention as claimed in claim 1.

Brady is cited to teach receiving multiple protocols on a single card. However, *Brady* does not teach or suggest transmitting data received according to multiple protocols over a backplane using a single format. Therefore, *Brady* does not cure the deficiencies of *Surprenant* and no combination of *Surprenant* and *Brady* can teach or suggest the invention as claimed in claim 1.

Claims 3-5, 20 and 23 depend from claim 1. Because dependent claims include the limitations of the claims from which they depend, Applicants submit that claims 3-5, 20 and 23 are not rendered obvious by *Surprenant* and *Brady* for at least the reasons set forth above.

Rejection of Claims 6, 8-10 and 26 Under 35 U.S.C. § 103(a)

Claims 6, 8-10 and 26 were rejected as being unpatentable over *Surprenant* in view of *Brady* and further in view of U.S. Patent No. 5,953,329 issued to Degges, et al. (*Dagges*).

Claim 6 recites:

a backplane interface to transmit and receive data over a backplane using a predetermined format;
a network interface to transmit and receive multiple channels of network traffic from external sources, the multiple channels of network traffic to include one or more channels of data according to a time division multiplexed (TDM) protocol and one or more channels of data according to a second protocol;
conversion circuitry to convert the TDM data and the second protocol data to the predetermined format; and
a time slot management circuit coupled between the backplane interface and the network interface, the time slot management circuit to route the channels of data over the backplane to one or more predetermined destinations.

Thus, Applicants claim a circuit that converts TDM data and other protocol data to a predetermined format for transmission over a backplane.

As mentioned above, the cited references cannot be combined to teach or suggest transmitting data received according to multiple protocols over a backplane using a single format. Therefore, no combination of the cited references can teach or suggest the invention as claimed in claim 6.

Claims 8-10, 26 and new claim 34 depend from claim 6. Because dependent claims include the limitations of the claims from which they depend, Applicants submit that claims 8-10, 26 and 34 are not rendered obvious by *Surprenant*, *Brady* and *Degges* for at least the reasons set forth above.

Rejection of Claims 21, 22, 24, 25, 29, 31 and 32 Under 35 U.S.C. § 103(a)

Claims 21, 22, 24, 25, 29, 31 and 32 were rejected as being unpatentable over *Surprenant* in view of *Brady* and further in view of U.S. Patent No. 6,407,997 issued to DeNap, et al. (*DeNap*). Claims 21, 22, 24, 25 and 29 depend from claim 1. Claim 31

depends from claim 11 and claim 32 depends from claim 16. *DeNap* is cited to teach used of optical signals. However, as discussed above, *DeNap* does not cure the deficiencies of *Suprenant* and *Brady*. Therefore, no combination of *Suprenant*, *Brady* and *DeNap* teaches or suggests the invention as claimed in claims 21, 22, 24, 25, 29, 31 and 32.

Rejection of Claims 27, 28 and 30 Under 35 U.S.C. § 103(a)

Claims 27, 28 and 30 were rejected as being unpatentable over *Surprenant* in view of *Brady* and further in view of *Degges* and *DeNap*. *Degges* discloses a switching matrix for T1 frames. See col. 4, lines 5-10. *Degges* discloses use of only T1 frames. Therefore, *Degges* does not teach or suggest conversion of TDM data and second protocol data to an internal cell format. *DeNap* is cited to teach used of optical signals. T1 frames can be carried as optical signals. Therefore, no combination of *Surprenant*, *Brady*, *Degges* and *DeNap* teaches or suggests the invention as claimed in claims 27, 28 and 30.

Rejection of Claim 33 Under 35 U.S.C. § 103(a)

Claim 33 was rejected as being unpatentable over *Surprenant* in view of *Brady* and further in view of U.S. Patent No. 5,541,921 issued to Swenson, et al. (*Swenson*).

Rejection of Claim 34 Under 35 U.S.C. § 103(a)

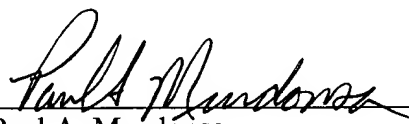
Claim 34 was rejected as being unpatentable over *Surprenant* in view of *Brady* and *Degges* and further in view *Swenson*. Claim 34 has been canceled. Therefore, the rejection of claim 34 is moot.

Conclusion

For at least the foregoing reasons, Applicants submit that the rejections have been overcome. Therefore, claims 1, 3-6, 8-11, 13-33 and 35-40 are in condition for allowance and such action is earnestly solicited. The Examiner is respectfully requested to contact the undersigned by telephone if such contact would further the examination of the present application. Please charge any shortages and credit any overcharges to our Deposit Account number 02-2666.

Respectfully submitted,
BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN, LLP

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Paul A. Mendonsa
Attorney for Applicant
Reg. No. 42,879

12400 Wilshire Boulevard
Seventh Floor
Los Angeles, CA 90025-1026
(503) 684-6200

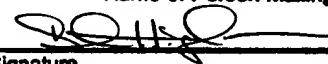
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8 September 2003
Date of Deposit
Deborah L. Hagan
Name of Person Mailing Correspondence

Signature
9/8/03
Date



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TC/A.U. 2665

Appendix